

Student Master

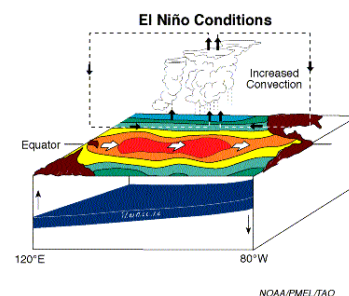
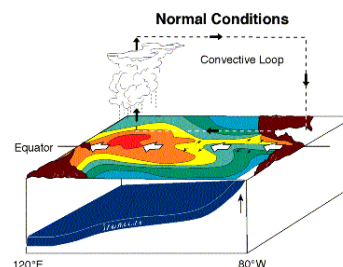
Supporting a Hypothesis with Data

**Your mission is to find evidence that supports or disproves this hypothesis:
An El Niño event occurred in 1990.**

During non-El Niño conditions, the trade winds blow towards the west across the tropical Pacific. These winds pile up warm surface water in the western Pacific.

During El Niño, the trade winds relax. Water temperatures in the eastern Pacific become higher than usual.

Make your plan to support or disprove the hypothesis cited above. Design an experiment using maps and graphs, and the model showing how El Niño works, to demonstrate whether or not an El Niño event occurred in 1990. Remember you must support your findings using real data.



1. Visit www.datainthe classroom.org, and find the El Niño module.
2. Follow the link to “Get Data.”
3. Select “Sea surface temperature” under “Which data?”
4. On the menu labeled “Which view,” select the format you wish to view, either Map or Graph.
5. Using the form, specify the date you wish to look at.
6. Click the “Get Data” button.
7. You can save images you wish to keep to your local computer. On a PC, right-click with the mouse and select “Save as....” On a Mac, hold down the Ctrl key and click with the mouse.
8. Repeat as necessary to generate maps and graphs to support or disprove the hypothesis. Organize your findings in a brief report.

Hints: Can you support or disprove the hypothesis by looking at data from only one year?

Be careful to look at the scale on each map and graph. Make sure you are comparing the numerical values and not just the appearance of the graphs.